

Parcel 8A Residential Development

Traffic Impact Analysis

Bluffton, South Carolina

Prepared for

Pulte Homes Company, LLC

Prepared by

Kimley»Horn

Signed March 2026

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Parcel 8A Residential Development Traffic Impact Analysis

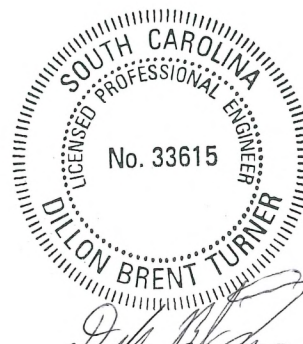
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A handwritten signature in black ink, appearing to read "Dillon Brent Turner".

03/26/2026

Signed March 2026

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Table of Contents

1 Executive Summary	iii
2 Introduction	1
2.1 Existing Roadway Conditions	3
3 Existing & Future No-Build Traffic Volume Development	5
3.1 Existing Traffic Volumes.....	5
3.2 Future No-Build Traffic Volumes	5
4 Project Traffic	9
4.1 Trip Generation	9
4.2 Trip Distribution & Assignment.....	9
4.3 Future Build Traffic Volumes.....	9
5 Capacity Analysis	13
5.1 New Riverside Road at Midpoint Boulevard	14
5.2 New Riverside Road at May River High School Access.....	16
5.3 New Riverside Road at Mainland Lakes Drive/Site Access #1	18
5.4 New Riverside Road at Myrtle Ford Road	20
5.5 New Riverside Road at Pritchard Lake Drive.....	22
5.6 New Riverside Road at Old Palmetto Bluff Road	24
5.7 New Riverside Road at Site Access #2	26
6 Conclusion	27

List of Figures

Figure 1 – Recommended Roadway Geometry & Traffic Control	iv
Figure 2 – Site Location and Study Area Map	2
Figure 3 – Existing Roadway Geometry & Traffic Control.....	4
Figure 4 – 2025 Existing Peak Hour Traffic Volumes	6
Figure 5 – Approved Development Project Trips	7
Figure 6 – 2028 No-Build Peak Hour Traffic Volumes	8
Figure 7 – Project Trip Distribution & Assignment	10
Figure 8 – 2028 Build Project Trips	11
Figure 9 – 2028 Build Traffic Volumes	12

List of Tables

Table 1 – Trip Generation Summary	9
Table 2 – Vehicular LOS Control Delay Thresholds for Intersections	13
Table 3 – Midpoint Boulevard at New Riverside Road.....	15
Table 4 – New Riverside Road at May River High School Access	17
Table 5 – New Riverside Road at Mainland Lakes Drive/Site Access #1.....	19
Table 6 – New Riverside Road at Myrtle Ford Road	21
Table 7 – New Riverside Road at Pritchard Lake Drive.....	23
Table 8 – New Riverside Road at Old Palmetto Bluff Road	25
Table 9 – New Riverside Road at Site Access #2	26

List of Appendices

A – Conceptual Site Plan
B – Traffic Count Data
C – SCDOT AADT Traffic Count Data & Growth Rate Calculations
D – Approved Development Project Trips
E – Traffic Volume Development Worksheets
F – Trip Generation Calculations
G – Capacity Analysis Reports
H – SCDOT Turn Lane Warrants

1 Executive Summary

The purpose of this traffic impact analysis (TIA) is to evaluate the potential vehicular traffic impacts of the proposed Parcel 8A Residential Development located in the southwest quadrant of the New Riverside Road at Myrtle Ford Road intersection in Bluffton, South Carolina. The proposed development is anticipated to be constructed and operational by 2028 and is planned to consist of 104 units of single-family detached housing. Based on the conceptual site plan, the proposed development is planned to be constructed with two access driveways. Site Access #1 and Site Access #2 are described below. The conceptual site plan is provided in **Appendix A**.

- **Site Access #1** – Planned to be located along New Riverside Road aligned with the existing intersection of Mainland Lakes Drive. This access is to be constructed with one ingress lane and one egress lane with full access and will function as the primary access to the site.
- **Site Access #2** – Planned to be located along New Riverside Road approximately 500 feet west of Myrtle Ford Road. This access is to be constructed with one ingress and one egress lane under right-in/right-out movement restrictions.

Traffic operations were evaluated under 2025 Existing, 2028 No-Build, and 2028 Build conditions during the AM and PM peak hours of travel. With the addition of traffic associated with the proposed development, the following improvements are recommended:

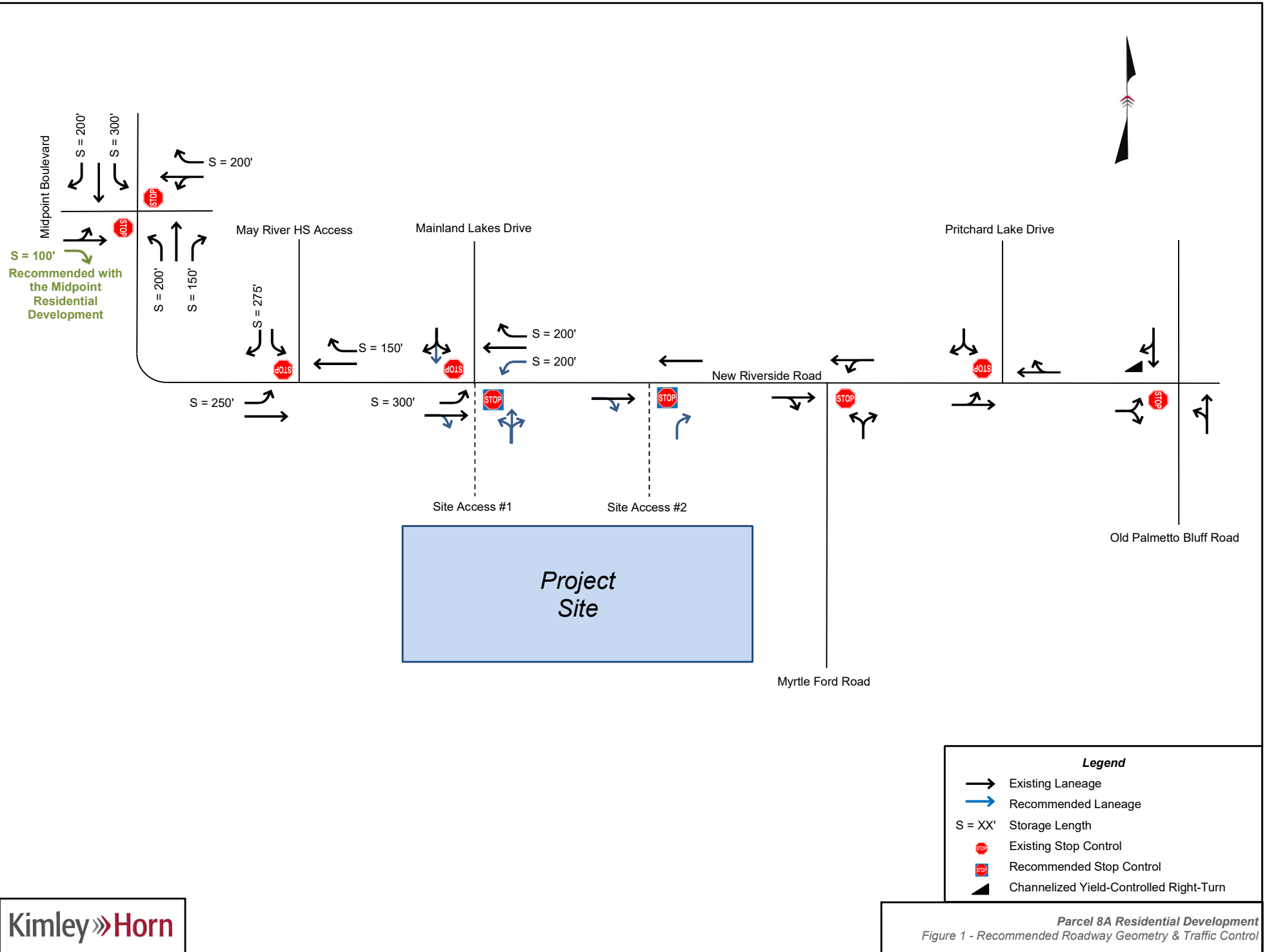
New Riverside Road at Mainland Lakes Drive/Site Access #1

- Construct the site access point as a full-movement access under minor-street stop-control with one ingress lane and one egress lane.
- Replace the existing striped hatching on the westbound approach with an exclusive westbound left-turn lane with 200 feet of full-width storage and an appropriate taper.

New Riverside Road at Site Access #2

- Construct the site access point as a right-in/right-out access under minor-street stop-control with one ingress lane and one egress lane.

Recommended roadway improvements are summarized in **Figure 1**.



2 Introduction

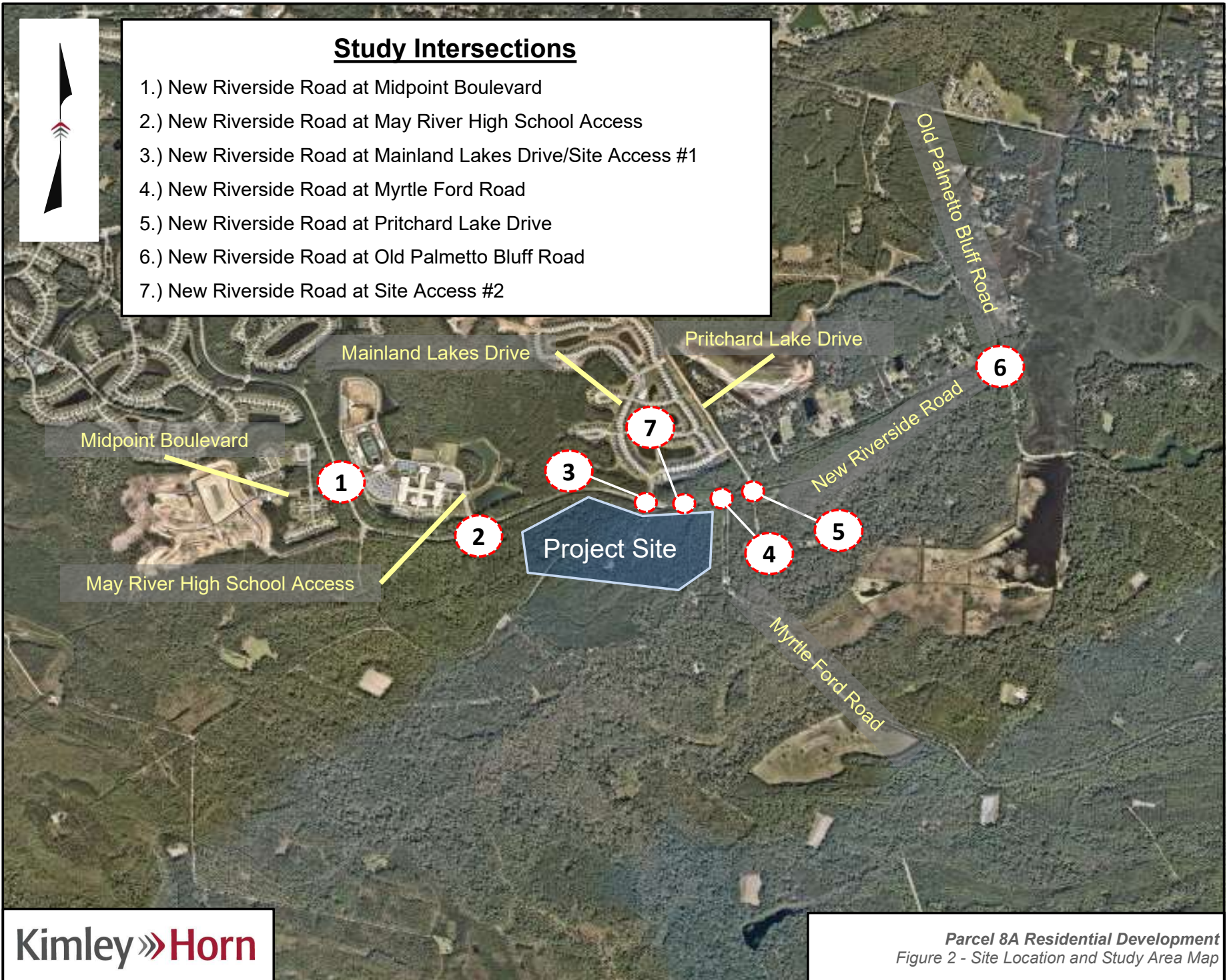
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Based on the conceptual site plan, the proposed development is planned to be constructed with two access driveways. Site Access #1 and Site Access #2 are described below. The conceptual site plan is provided in **Appendix A**.

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- **Site Access #2** – Planned to be located along New Riverside Road approximately 500 feet west of Myrtle Ford Road. This access is to be constructed with one ingress and one egress lane under right-in/right-out movement restrictions.

The proposed site location and study area are shown in **Figure 2**. Traffic operations were evaluated under 2025 Existing, 2028 No-Build, and 2028 Build conditions during the AM and PM peak hours of travel at the following intersections:

1. New Riverside Road at Midpoint Boulevard
2. New Riverside Road at May River High School Access
3. New Riverside Road at Mainland Lakes Drive/Site Access #1
4. New Riverside Road at Myrtle Ford Road
5. New Riverside Road at Pritchard Lake Drive
6. New Riverside Road at Old Palmetto Bluff Road
7. New Riverside Road at Site Access #2



2.1 Existing Roadway Conditions

The primary roadways within the vicinity of the site are New Riverside Road, Midpoint Boulevard, Mainland Lakes Drive, Myrtle Ford Road, Pritchard Lake Drive, and Old Palmetto Bluff Road. Key characteristics of each of these roadways are summarized below.

New Riverside Road

New Riverside Road is a two-lane, undivided local roadway with a posted speed limit of 40 miles per hour (mph) within the vicinity of the site. There is no SCDOT count station located along New Riverside Road within the study area.

Midpoint Boulevard

Midpoint Boulevard is a two-lane, undivided local roadway with a posted speed limit of 25 mph within the vicinity of the site. There is no SCDOT count station located along Midpoint Boulevard within the study area.

Mainland Lakes Drive

Mainland Lakes Drive is a two-lane, undivided local roadway with a posted speed limit of 25 mph within the vicinity of the site. There is no SCDOT count station located along Mainland Lakes Drive within the study area.

Myrtle Ford Road

Myrtle Ford Road is a two-lane, undivided local roadway with a posted speed limit of 30 mph within the vicinity of the site. There is no SCDOT count station located along Myrtle Ford Road within the study area.

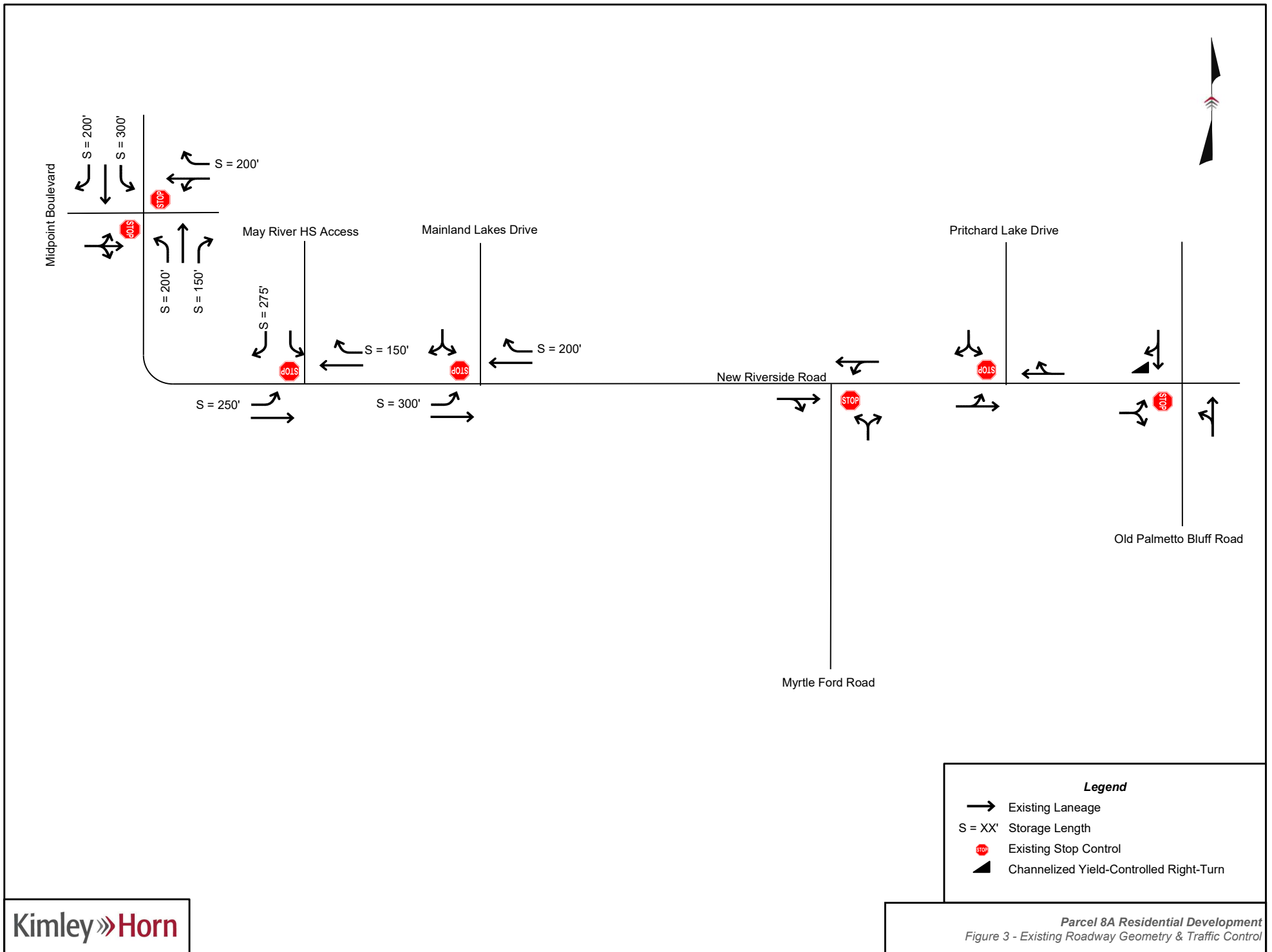
Pritchard Lake Drive

Pritchard Lake Drive is a two-lane, undivided local roadway with a posted speed limit of 30 mph within the vicinity of the site. There is no SCDOT count station located along Pritchard Lake Drive within the study area.

Old Palmetto Bluff Road

Old Palmetto Bluff Road is a two-lane, undivided local roadway with a posted speed limit of 25 mph within the vicinity of the site. There is no SCDOT count station located along Old Palmetto Bluff Road within the study area.

Existing geometry and traffic control at the study area intersections is illustrated in **Figure 3**.



3 Existing & Future No-Build Traffic Volume Development

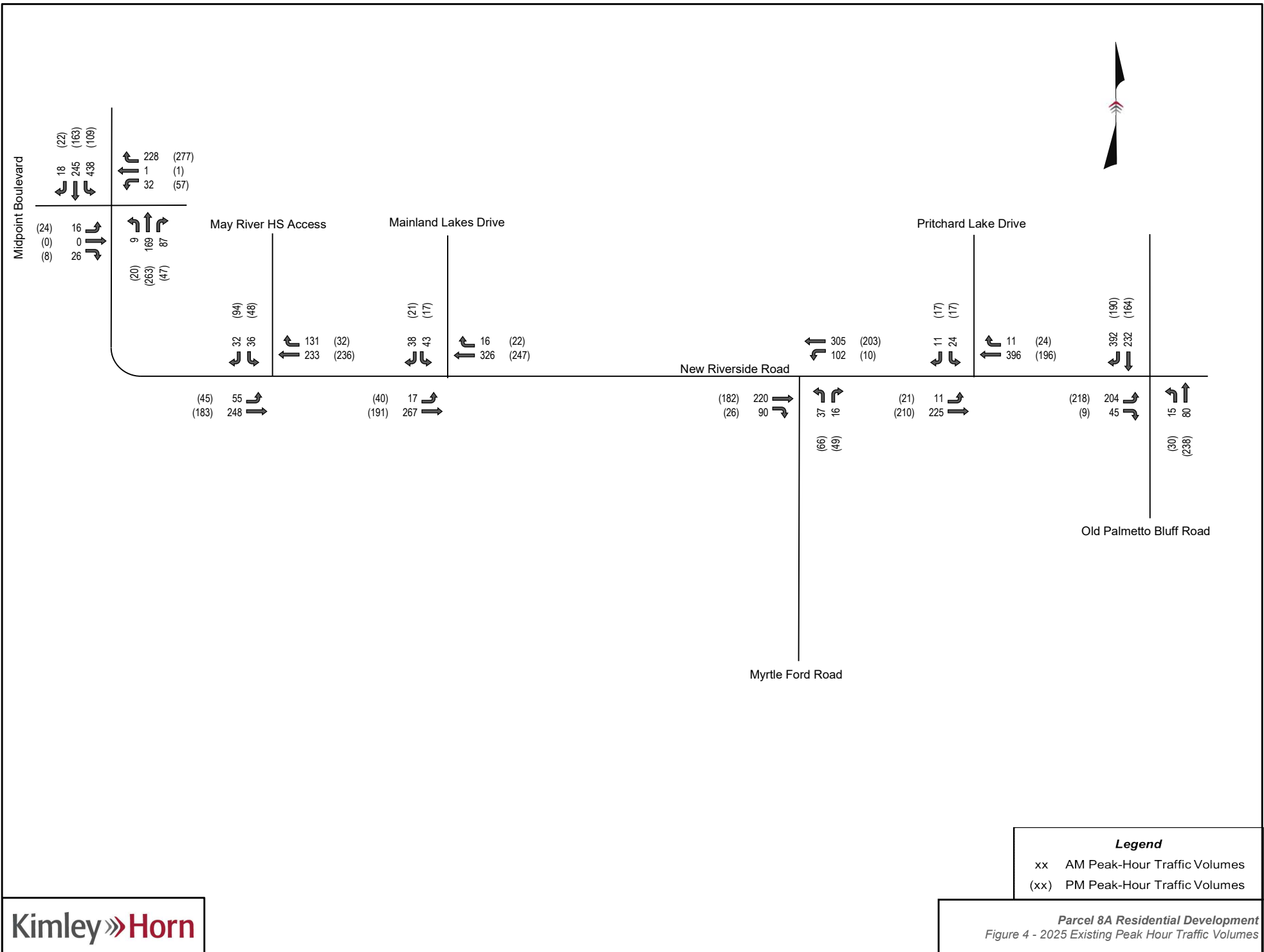
3.1 Existing Traffic Volumes

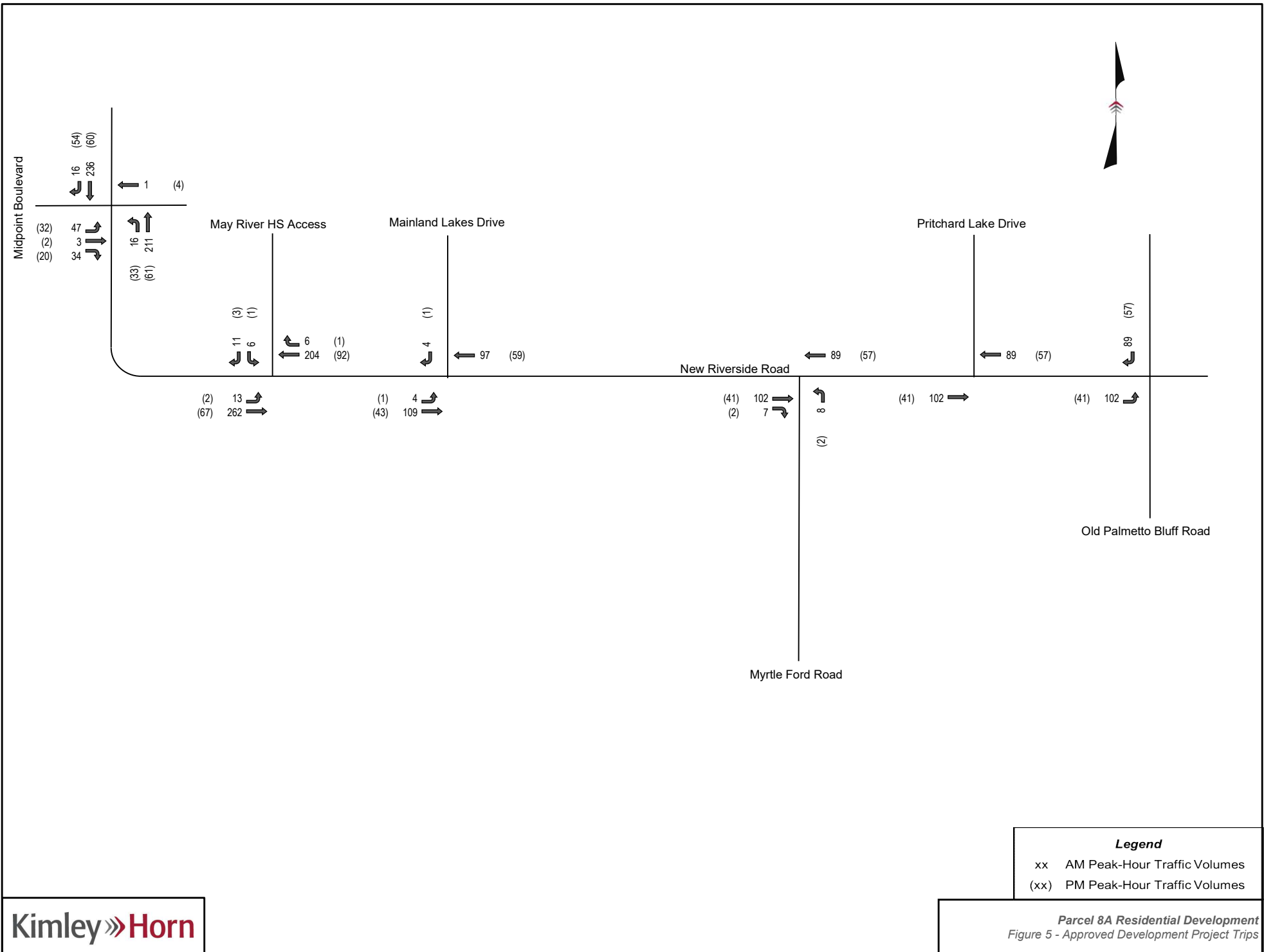
Peak hour turning movement counts were performed at the existing study intersections on Thursday, March 27th, 2025. The AM peak period traffic counts were collected from 7:00 AM to 9:00 AM, and the PM peak period traffic counts were collected from 4:00 PM to 6:00 PM. The peak hour traffic counts were used to perform the analysis presented in this report. The complete traffic count data is provided in **Appendix B** and **Figure 4** illustrates the 2025 Existing peak hour traffic volumes.

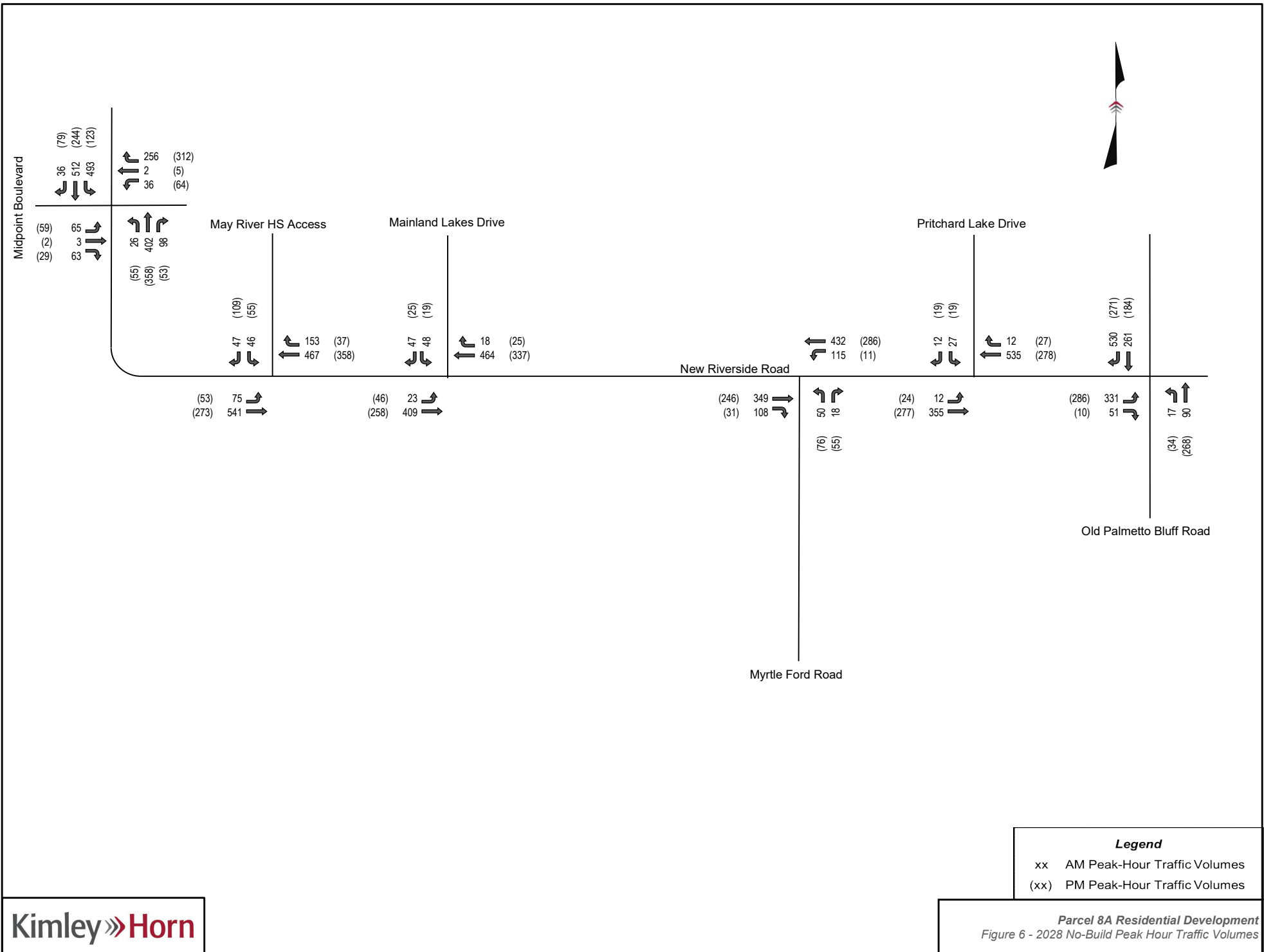
3.2 Future No-Build Traffic Volumes

The proposed development is expected to be complete by 2028. A background (i.e., non-project) growth rate was developed based on a review of nearby SCDOT count stations. Based on the historic traffic count data, an annual growth rate of 3% per year was applied to 2025 Existing traffic volumes to develop 2028 traffic volumes.

Two approved developments were identified in the vicinity of the proposed development, which included Midpoint Residential and May River Elementary School. Project trips associated with these approved developments, shown in **Figure 5**, were added to the grown 2028 traffic volumes, forming the 2028 No-Build (i.e., non-project) traffic volumes, which are summarized in **Figure 6**. Growth rate data and calculations are included in **Appendix C**. Project trips for the approved developments are included in **Appendix D**. Intersection volume development worksheets are included in **Appendix E**.







4 Project Traffic

4.1 Trip Generation

The trip generation rates and equations published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition* were used to estimate the trip generation potential for the development. The analysis was performed using the information provided for the land use code (LUC) 210 – Single-Family Detached Housing. Detailed trip generation calculations are included in **Appendix F**.

Due to the residential nature of this development, pass-by reductions and internal capture are not applicable for the trip generation calculations. **Table 1** indicates that the development is anticipated to generate 77 new external trips (20 in/57 out) during the AM peak hour and 103 new external trips (65 in/38 out) during the PM peak hour.

Table 1 – Trip Generation Summary

Land Use	Intensity	Units	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
210 – Single-Family Detached Housing	104	DU	1,046	77	20	57	103	65	38
Total Net New External Trips			1,046	77	20	57	103	65	38

4.2 Trip Distribution & Assignment

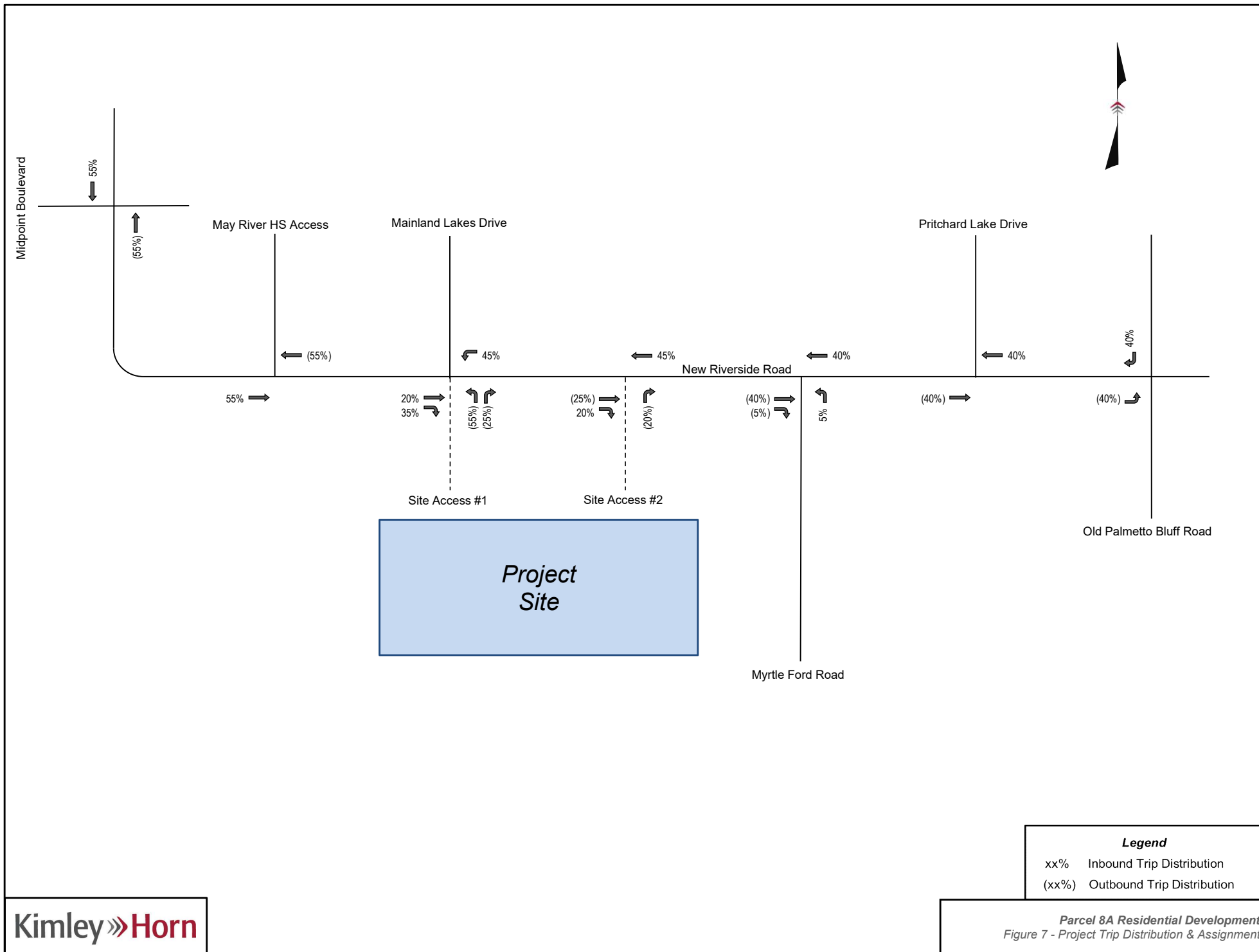
Distribution and assignment of project trips to the surrounding roadway network was determined based on existing travel patterns, nearby land uses, and population densities in the area. The trip distribution and assignment percentages used in the analysis are as follows:

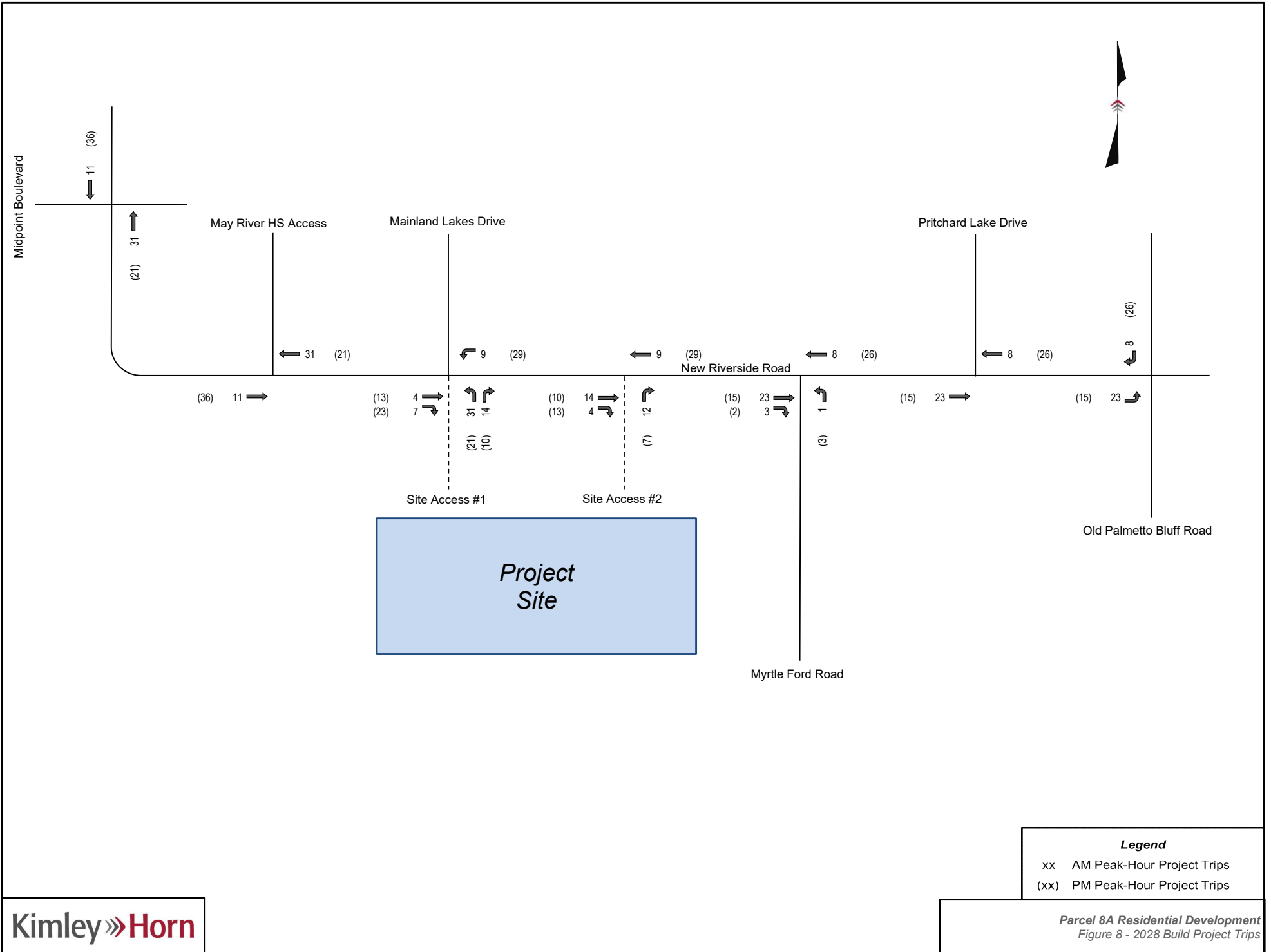
- 55% to/from the North via New Riverside Road
- 40% to/from the North via Old Palmetto Bluff Road
- 5% to/from the South via Myrtle Ford Road

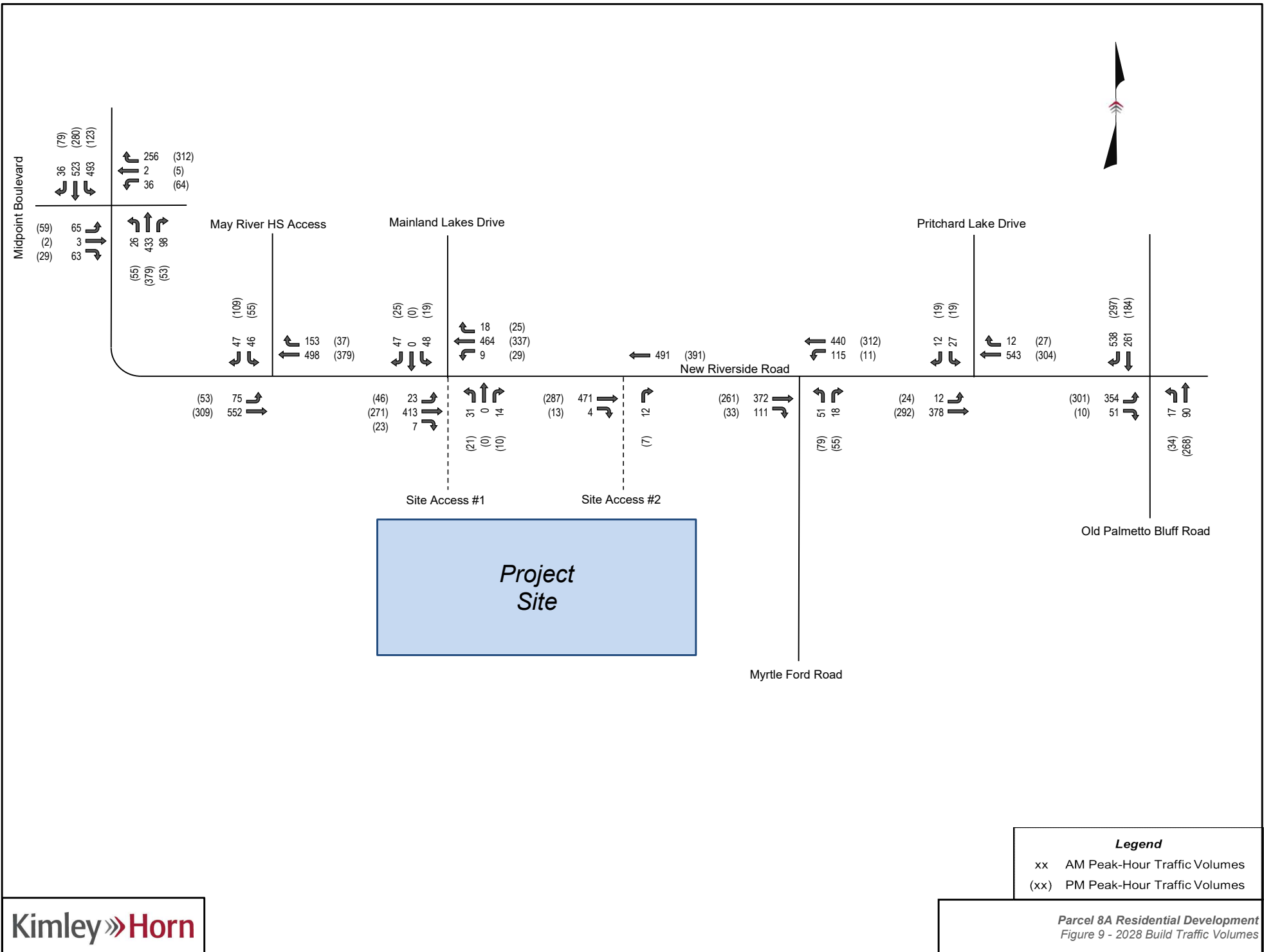
The site trip distribution and assignment is illustrated in **Figure 7**. The projected 2028 Build new external trips are illustrated in **Figure 8**.

4.3 Future Build Traffic Volumes

The new external trips were added to the 2028 No-Build traffic volumes to develop 2028 Build traffic volumes. The total 2028 Build peak hour traffic volumes are shown in **Figure 9**.







5 Capacity Analysis

Capacity analyses were conducted under 2025 Existing, 2028 No-Build, and 2028 Build conditions using Synchro Version 12. This software package utilizes methodologies contained within the *Highway Capacity Manual, 6th Edition* (HCM6) to evaluate the operating characteristics of an intersection under given geometric, traffic control, and traffic demand scenarios.

The LOS for two-way stop-controlled (TWSC) intersections is determined based on control delay on the minor street approaches and for the major street left-turn movements during the AM and PM peak hours of travel. It should be noted that it is typical for the minor street approaches of a TWSC intersection—particularly left-turn movements onto the major street—to experience long delays during the peak hours of travel. However, most of the traffic moving through the intersection (i.e., major street through movements) experiences short delays. The queuing analysis assumes a passenger car length of 25 feet.

Table 2 lists the control delay-based LOS thresholds published in HCM6 for unsignalized intersections. The capacity analysis worksheets are included in **Appendix G**.

Table 2 – Vehicular LOS Control Delay Thresholds for Intersections

Level of Service	Control Delay per Vehicle (sec/veh)
	Unsignalized
A	≤ 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

To qualitatively describe operations at unsignalized intersections, the following terminology is used:

- LOS A-C operations are considered short delays.
- LOS D-E operations are considered moderate delays.
- LOS F operations are considered long delays.

As part of the capacity analysis, SCDOT's default Synchro parameters were utilized. Existing peak hour factors (PHFs) were utilized for the existing and future-year scenarios, limited to a minimum of 0.90 and a maximum of 0.95. Existing heavy vehicle percentages were utilized for all scenarios, with a minimum of 2% considered.

5.1 New Riverside Road at Midpoint Boulevard

Capacity analysis results for the intersection of New Riverside Road at Midpoint Boulevard are presented in **Table 3**.

Results

As shown in **Table 3**, the eastbound and westbound approaches operate with long delays during the AM peak hour under 2025 Existing conditions. During the PM peak hour, the eastbound approach operates with long delays and the westbound approach operates with moderate delays.

Under 2028 No-Build conditions, it is assumed that an exclusive eastbound right-turn lane is constructed, consistent with improvements identified in the *Midpoint Residential TIA* (Kimley-Horn, December 2022). The eastbound and westbound approaches are anticipated to operate at the same LOS compared to 2025 Existing conditions.

With the addition of project-related traffic under 2028 Build conditions, the eastbound approach is anticipated to continue to operate with long delays during both peak hours. The 95th percentile queuing is anticipated to increase by less than one passenger car during both peak hours. The westbound approach is anticipated to continue to operate with long delays during the AM peak hour and to operate with moderate delays during the PM peak hour. Similarly, queuing is anticipated to increase by less than one passenger car during both peak hours.

Recommendations

With the addition of traffic associated with the proposed development, the stop-controlled approaches are anticipated to operate with moderate to long delays during the AM and PM peak hours. It is common for minor-street stop-controlled approaches to operate with long delays during peak hour conditions, and since queuing is anticipated to increase by less than one passenger car with the addition of project-related traffic, no improvements are recommended with the development.

Table 3 – Midpoint Boulevard at New Riverside Road

Condition	Measure	Midpoint Boulevard			May River High School			New Riverside Road			New Riverside Road		
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Peak Hour													
2025 Existing	Approach LOS (Delay)	F (\$)			F (61.3)			A (8.0)*			B (10.8)*		
	Synchro 95th Q	140'			118'	45'	0'	0'	0'	70'	0'	0'	
2028 No-Build	Approach LOS (Delay)	F (\$)			F (220.7)			A (8.8)*			B (12.6)*		
	Synchro 95th Q	278'	13'	155'	63'	3'	0'	0'	83'	0'	0'		
2028 Build	Approach LOS (Delay)	F (\$)			F (267.6)			A (8.9)*			B (13.1)*		
	Synchro 95th Q	280'	13'	160'	68'	3'	0'	0'	88'	0'	0'		
PM Peak Hour													
2025 Existing	Approach LOS (Delay)	F (59.3)			C (17.7)			A (7.8)*			A (8.5)*		
	Synchro 95th Q	40'			35'	75'	3'	0'	0'	10'	0'	0'	
2028 No-Build	Approach LOS (Delay)	F (193.1)			C (22.9)			A (8.2)*			A (8.7)*		
	Synchro 95th Q	140'	3'	60'	78'	5'	0'	0'	10'	0'	0'		
2028 Build	Approach LOS (Delay)	F (252.7)			D (25.3)			A (8.3)*			A (8.8)*		
	Synchro 95th Q	155'	3'	70'	83'	5'	0'	0'	10'	0'	0'		
	Existing Storage							200'	200'	150'	300'	200'	

*Left-turn delay is reported on major street approaches at unsignalized intersections.

\$-Delay exceeds 300 sec/veh.

5.2 New Riverside Road at May River High School Access

Capacity analysis results for the intersection of New Riverside Road at May River High School Access are presented in **Table 4**.

Results

As shown in **Table 4**, the eastbound left-turn movement operates with short delays during the AM and PM peak hours, and the southbound approach operates with short delays during the AM and PM peak hours under 2025 Existing conditions.

Under 2028 No-Build conditions, the eastbound left-turn movement is anticipated to continue to operate with short delays during the AM and PM peak hours, and the southbound approach is anticipated to continue to operate with short delays during the AM and PM peak hours.

With the addition of project-related traffic under 2028 Build conditions, the eastbound left-turn movement is anticipated to continue to operate with short delays during the AM and PM peak hours, and the southbound approach is anticipated to operate with moderate delays during the AM peak hour and short delays during the PM peak hour.

Delay for the southbound approach is anticipated to increase by less than 2 seconds during the AM peak hour. Queuing for the southbound approach is anticipated to increase by less than one passenger car length during both peak hours.

Recommendations

With the addition of traffic associated with the proposed development, the approaches are anticipated to operate with short to moderate delays during the AM and PM peak hours. No improvements are recommended with the development.

Table 4 – New Riverside Road at May River High School Access

Condition	Measure	New Riverside Road		New Riverside Road		May River High School Access	
		EBL	EBT	WBT	WBR	SBL	SBR
AM Peak Hour							
2025 Existing	Approach LOS (Delay)	A (8.0)*		A (0.0)		B (14.0)	
	Synchro 95th Q	5'	0'	0'	0'	13'	5'
2028 No-Build	Approach LOS (Delay)	A (8.7)*		A (0.0)		C (23.9)	
	Synchro 95th Q	8'	0'	0'	0'	30'	8'
2028 Build	Approach LOS (Delay)	A (8.9)*		A (0.0)		D (25.8)	
	Synchro 95th Q	8'	0'	0'	0'	33'	8'
PM Peak Hour							
2025 Existing	Approach LOS (Delay)	A (8.0)*		A (0.0)		B (12.1)	
	Synchro 95th Q	3'	0'	0'	0'	13'	15'
2028 No-Build	Approach LOS (Delay)	A (8.3)*		A (0.0)		B (14.0)	
	Synchro 95th Q	5'	0'	0'	0'	18'	18'
2028 Build	Approach LOS (Delay)	A (8.3)*		A (0.0)		B (14.7)	
	Synchro 95th Q	5'	0'	0'	0'	18'	18'
	Existing Storage	250'			150'		275'

*Left-turn delay is reported on major street approaches at unsignalized intersections.

5.3 New Riverside Road at Mainland Lakes Drive/Site Access #1

Capacity analysis results for the intersection of New Riverside Road at Mainland Lakes Drive/Site Access #1 are presented in **Table 5**.

Results

As shown in **Table 5**, the eastbound left-turn movement and southbound approach operate with short delays during the AM and PM peak hours under 2025 Existing conditions.

Under 2028 No-Build conditions, the eastbound left-turn movement and southbound approach are anticipated to continue to operate with short delays during the AM and PM peak hours.

A turn lane warrant analysis was conducted using SCDOT guidelines to determine if a westbound left-turn lane or an eastbound right-turn lane will be necessary for project traffic entering the site. Based on the turn lane warrant analysis, the thresholds were not met to warrant a westbound left-turn lane or an eastbound right-turn lane under 2028 Build conditions. Turn lane warrant analysis worksheets are included in **Appendix H**. While thresholds were not met, there is existing striped hatching in the place of an exclusive westbound left-turn lane. It is recommended that the approach be restriped to replace the hatching with an exclusive westbound left-turn lane with a full-width storage of 200 feet and an appropriate taper.

With the addition of project-related traffic under 2028 Build conditions, the eastbound left-turn movement is anticipated to continue to operate with short delays during the AM and PM peak hours. The northbound approach is anticipated to operate with moderate and short delays during the AM and PM peak hours respectively. The southbound approach is anticipated to operate with moderate delays during the AM peak hour and with short delays during the PM peak hour. Queueing on the southbound approach is anticipated to increase by less than one passenger car length during the AM peak hour, and it is typical for minor-street approaches to operate with moderate delays at two-way stop-controlled intersections.

Recommendations

With the addition of traffic associated with the proposed development, the northbound approach is anticipated to operate with moderate and short delays under 2028 Build conditions with queuing of one passenger car or less during the AM and PM peak hours respectively. The southbound approach is anticipated to operate with moderate delays during the AM peak hour, and queuing is anticipated to increase by 10 feet. Moderate or long delays are typical for minor-street approaches at two-way stop-controlled intersections.

It is recommended that the westbound approach be restriped to include an exclusive westbound left-turn lane with a full-width storage of 200 feet and an appropriate taper. It is recommended that Site Access #1 be placed under minor-street stop-control and constructed with one ingress lane and one egress lane.

Table 5 – New Riverside Road at Mainland Lakes Drive/Site Access #1

Condition	Measure	New Riverside Road			New Riverside Road			Site Access #1			Mainland Lakes Drive		
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Peak Hour													
2025 Existing	Approach LOS (Delay)	A (8.3)*			A (0.0)			-			C (15.5)		
	Synchro 95th Q	3'	0'	-	-	0'	0'				23'		
2028 No-Build	Approach LOS (Delay)	A (8.6)*			A (0.0)			-			C (19.8)		
	Synchro 95th Q	3'	0'	-	-	0'	0'				33'		
2028 Build	Approach LOS (Delay)	A (8.6)*			A (8.3)*			D (26.1)			D (25.0)		
	Synchro 95th Q	3'	0'		0'	0'	0'	20'			43'		
PM Peak Hour													
2025 Existing	Approach LOS (Delay)	A (8.0)*			A (0.0)			-			B (11.8)		
	Synchro 95th Q	3'	0'	-	-	0'	0'				5'		
2028 No-Build	Approach LOS (Delay)	A (8.3)*			A (0.0)			-			B (13.2)		
	Synchro 95th Q	3'	0'	-	-	0'	0'				8'		
2028 Build	Approach LOS (Delay)	A (8.3)*			A (8.0)*			C (18.2)			C (15.3)		
	Synchro 95th Q	3'	0'		3'	0'	0'	10'			10'		
	Existing Storage	300'					200'						

Note: *Left-turn delay is reported on major street approaches at unsignalized intersections.

5.4 New Riverside Road at Myrtle Ford Road

Capacity analysis results for the intersection of New Riverside Road at Myrtle Ford Road are presented in **Table 6**.

Results

As shown in **Table 6**, the westbound left-turn movement and northbound approach operate with short delays during the AM and PM peak hours under 2025 Existing conditions.

Under 2028 No-Build conditions, the westbound left-turn movement is anticipated to continue to operate with short delays during the AM and PM peak hours, and the northbound approach is anticipated to operate with moderate delays during the AM peak hour and with short delays during the PM peak hour.

With the addition of project-related traffic under 2028 Build conditions, the westbound left-turn movement is anticipated to continue to operate with short delays during the AM and PM peak hours, and the northbound approach is anticipated to continue to operate with moderate delays during the AM peak hour and short delays during the PM peak hour.

Recommendations

With the addition of traffic associated with the proposed development, the approaches are anticipated to continue to operate with short-to-moderate delays during the AM and PM peak hours. No improvements are recommended with the development.

Table 6 – New Riverside Road at Myrtle Ford Road

Condition	Measure	New Riverside Road		New Riverside Road		Myrtle Ford Road	
		EBT	EBR	WBL	WBT	NBL	NBR
AM Peak Hour							
2025 Existing	Approach LOS (Delay)	A (0.0)		A (8.5)*		C (20.2)	
	Synchro 95th Q	0'		10'		20'	
2028 No-Build	Approach LOS (Delay)	A (0.0)		A (8.9)*		D (30.4)	
	Synchro 95th Q	0'		10'		38'	
2028 Build	Approach LOS (Delay)	A (0.0)		A (9.0)*		D (33.1)	
	Synchro 95th Q	0'		10'		40'	
PM Peak Hour							
2025 Existing	Approach LOS (Delay)	A (0.0)		A (7.7)*		B (12.2)	
	Synchro 95th Q	0'		0'		20'	
2028 No-Build	Approach LOS (Delay)	A (0.0)		A (7.9)*		B (14.3)	
	Synchro 95th Q	0'		0'		28'	
2028 Build	Approach LOS (Delay)	A (0.0)		A (7.9)*		C (15.2)	
	Synchro 95th Q	0'		0'		30'	

Note: *Left-turn delay is reported on major street approaches at unsignalized intersections.

5.5 New Riverside Road at Pritchard Lake Drive

Capacity analysis results for the intersection of New Riverside Road at Pritchard Lake Drive are presented in **Table 7**.

Results

As shown in **Table 7**, the eastbound left-turn movement and southbound approach operate with short delays during the AM and PM peak hours under 2025 Existing conditions.

Under 2028 No-Build conditions, the eastbound left-turn movement and southbound approach are anticipated to continue to operate with short delays during the AM and PM peak hours.

With the addition of project-related traffic under 2028 Build conditions, the eastbound left-turn movement and southbound approach are anticipated to continue to operate with short delays during the AM and PM peak hours.

Recommendations

With the addition of traffic associated with the proposed development, the approaches are anticipated to continue to operate with short delays during the AM and PM peak hours. No improvements are recommended with the development.

Table 7 – New Riverside Road at Pritchard Lake Drive

Condition	Measure	New Riverside Road		New Riverside Road		Pritchard Lake Drive	
		EBL	EBT	WBT	WBR	SBL	SBR
AM Peak Hour							
2025 Existing	Approach LOS (Delay)	A (8.4)*		A (0.0)		B (14.7)	
	Synchro 95th Q	0'		0'		8'	
2028 No-Build	Approach LOS (Delay)	A (8.8)*		A (0.0)		C (18.9)	
	Synchro 95th Q	0'		0'		13'	
2028 Build	Approach LOS (Delay)	A (8.8)*		A (0.0)		C (19.5)	
	Synchro 95th Q	0'		0'		13'	
PM Peak Hour							
2025 Existing	Approach LOS (Delay)	A (7.8)*		A (0.0)		B (11.3)	
	Synchro 95th Q	3'		0'		5'	
2028 No-Build	Approach LOS (Delay)	A (8.0)*		A (0.0)		B (12.6)	
	Synchro 95th Q	3'		0'		8'	
2028 Build	Approach LOS (Delay)	A (8.1)*		A (0.0)		B (13.1)	
	Synchro 95th Q	3'		0'		8'	

*Left-turn delay is reported on major street approaches at unsignalized intersections.

5.6 New Riverside Road at Old Palmetto Bluff Road

Capacity analysis results for the intersection of New Riverside Road at Old Palmetto Bluff Road are presented in **Table 8**.

Results

As shown in **Table 8**, the northbound left-turn movement and eastbound approach operate with short delays during the AM and PM peak hours under 2025 Existing conditions.

Under 2028 No-Build conditions, the northbound left-turn movement is anticipated to continue to operate with short delays during the AM and PM peak hours, and the eastbound approach is anticipated to experience long and moderate delays during the AM and PM peak hours respectively.

With the addition of project-related traffic under 2028 Build conditions, the northbound left-turn movement is anticipated to continue to operate with short delays during the AM and PM peak hours, and the eastbound approach is anticipated to continue to operate with long to moderate delays during the AM and PM peak hours respectively. Queuing on the eastbound approach is anticipated to increase by approximately three passenger cars and approximately one passenger car during the AM and PM peak hours respectively.

Recommendations

With the addition of traffic associated with the proposed development, the approaches are anticipated to continue to operate with long to moderate delays during the AM and PM peak hours respectively. It is common for minor-street stop-controlled approaches to operate with long delays during peak hour conditions, and since queuing is anticipated to increase by approximately three passenger cars during the PM peak hour with the addition of project-related traffic, no improvements are recommended with the development.

Table 8 – New Riverside Road at Old Palmetto Bluff Road

Condition	Measure	New Riverside Road		Old Palmetto Bluff Road		Old Palmetto Bluff Road	
		EBL	EBR	NBL	NBT	SBT	SBR
AM Peak Hour							
2025 Existing	Approach LOS (Delay)	C (23.7)		A (7.8)*		A (0.0)	
	Synchro 95th Q	98'		0'		0'	
2028 No-Build	Approach LOS (Delay)	F (94.7)		A (7.9)*		A (0.0)	
	Synchro 95th Q	355'		0'		0'	
2028 Build	Approach LOS (Delay)	F (118.5)		A (7.9)*		A (0.0)	
	Synchro 95th Q	418'		0'		0'	
PM Peak Hour							
2025 Existing	Approach LOS (Delay)	C (20.6)		A (7.6)*		A (0.0)	
	Synchro 95th Q	73'		3'		0'	
2028 No-Build	Approach LOS (Delay)	E (38.5)		A (7.7)*		A (0.0)	
	Synchro 95th Q	163'		3'		0'	
2028 Build	Approach LOS (Delay)	E (44.8)		A (7.7)*		A (0.0)	
	Synchro 95th Q	190'		3'		0'	

*Left-turn delay is reported on major street approaches at unsignalized intersections.

5.7 New Riverside Road at Site Access #2

Capacity analysis results for the intersection of New Riverside Road at Site Access #2 are presented in **Table 9**.

Results

As shown in **Table 9**, the approaches are expected to operate with short delays during the AM and PM peak hours under 2028 Build conditions.

A turn lane warrant analysis was conducted using SCDOT guidelines to determine if an eastbound right-turn lane will be necessary for project traffic entering the site. Based on the turn lane warrant analysis, the thresholds were not met to warrant an eastbound right-turn lane under 2028 Build conditions. Turn lane warrant analysis worksheets are included in **Appendix H**.

Recommendations

It is recommended that Site Access #2 be placed under minor-street stop-control, constructed with one ingress lane and one egress lane, and restricted to right-in/right-out movements only.

Table 9 – New Riverside Road at Site Access #2

Condition	Measure	New Riverside Road		New Riverside Road	Site Access #2
		EBT	EBR	WBT	NBR
AM Peak Hour					
2028 Build	Approach LOS (Delay)	A (0.0)		A (0.0)	A (0.0)
	Synchro 95th Q	0'		0'	0'
PM Peak Hour					
2028 Build	Approach LOS (Delay)	A (0.0)		A (0.0)	B (10.1)
	Synchro 95th Q	0'		0'	0'

*Left-turn delay is reported on major street approaches at unsignalized intersections.

6 Conclusion

The purpose of this TIA is to evaluate the potential vehicular traffic impacts of the proposed Parcel 8A Residential Development located in the southwest quadrant of the New Riverside Road at Myrtle Ford Road intersection in Bluffton, South Carolina. The proposed development is anticipated to be constructed and operational by 2028 and is planned to consist of 104 units of single-family detached housing. Based on the conceptual site plan, the proposed development is planned to be constructed with two access driveways. Site Access #1 and Site Access #2 are described below. The conceptual site plan is provided in **Appendix A**.

- **Site Access #1** – Planned to be located along New Riverside Road aligned with the existing intersection of Mainland Lakes Drive. This access is to be constructed with one ingress lane and one egress lane with full access and will function as the primary access to the site.
- **Site Access #2** – Planned to be located along New Riverside Road approximately 500 feet west of Myrtle Ford Road. This access is to be constructed with one ingress and one egress lane under right-in/right-out movement restrictions.

Traffic operations were evaluated under 2025 Existing, 2028 No-Build, and 2028 Build conditions during the AM and PM peak hours of travel. With the addition of traffic associated with the proposed development, the following improvements are recommended:

New Riverside Road at Mainland Lakes Drive/Site Access #1

- Construct the site access point as a full-movement access under minor-street stop-control with one ingress lane and one egress lane.
- Replace the existing striped hatching on the westbound approach with an exclusive westbound left-turn lane with 200 feet of full-width storage and an appropriate taper.

New Riverside Road at Site Access #2

- Construct the site access point as a right-in/right-out access under minor-street stop-control with one ingress lane and one egress lane.